Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DONNA S. DAVIS

Appeal No. 1998-1005
Application No. 08/362,042

HEARD: October 17, 2001

Before OWENS, LIEBERMAN, and DELMENDO, Administrative Patent Judges.

DELMENDO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the examiner's refusal to allow claims 1 through 10, which are apparently all of the claims remaining in the above-identified application.[1]

[1] In response to the final Office action of July 15, 1996 (paper 8), the appellant submitted an amendment under 37 CFR § 1.116 (1981) on April 17, 1997 (paper 12), proposing changes to claims 1-3 and 10 and the cancellation of claims 11 and 12. Although the examiner did not issue an advisory action expressly

The subject matter on appeal relates to a food covered with a film comprising at least one layer, wherein the layer includes an ethylene polymer having the recited properties. According to the present specification, the ethylene polymers having the recited properties claims are made by a certain polymerization process using particular metallocene catalysts and, when converted into films, exhibit "not only excellent physical properties, such as balanced tear resistance and higher dart drop impact, but also...superior water vapor transmission rates [WVTR]..." (Page 3, lines 13-17; page 4, lines 6-9; Figure I.) In addition, it is said that the recited ethylene polymers are characterized by narrower molecular weight distribution and lower volatiles as compared to resins made from conventional Ziegler-Natta catalysts. (Page 5, lines 9-13; page 12, line 31 to page 13, line 10.) Further details of this appealed subject matter are recited in illustrative claims 1 and 10 reproduced below:

> 1. A food covered with a film said film comprising at least one layer, said film including an ethylene polymer, said ethylene polymer having a

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indicating whether the proposed amendment was entered, we note that the examiner agrees with the appellant's statements regarding the status of the claims and status of amendments after final rejection. (Appeal brief, p. 1; examiner's answer, p. 2.) It is clear, therefore, that the examiner has entered the proposed amendment.

density in the range of from about 0.935 g/cm^3 to about 0.965 g/cm^3 and a WVTR up to about 0.54 g/100 in^2/24 hrs./mil; wherein said ethylene polymer has an M_z/M_w less than about 2.5, said ethylene polymer having volatile levels not exceeding 100 wppm of < C_{20}, and not exceeding 10 wppm of hexadecene.

10. A food consisting essentially of;
a) a food; and
b) a package covering and in contact with said food, said package including a polyethylene, said polyethylene having:
i) a density in the range of from about 0.935 g/cm^3 to about 0.965 g/cm^3;
ii) a WVTR up to about 0.54 g/m^2/24hr/mil;
iii) a M_w/M_n up to about 3;
iv) a M_z/M_w less than about 2;
v) a M_{z+1}/M_w in the range of from about 1.4 to about 1.9;
vi) a < C_{20} volatiles content less than about 75 wppm; and
vii) a hexadecene volatiles content less than about 7.5 wppm.

The examiner relies on the following prior art references as evidence of unpatentability:

Nowlin	4,833,111	May 23, 1989
Welborn, Jr. et al. (Welborn)	5,084,534	Jan. 28, 1992
Nordness et al. (Nordness)	5,089,308	Feb. 18, 1992

The Wiley Encyclopedia of Packaging Technology 313-14 (Marilyn Bakker ed., 1986)(Packaging Technology).

Claims 1 through 10 on appeal stand rejected under 35 U.S.C. § 103(a) as unpatentable over Welborn in view of

Nordness, Nowlin, and Packaging Technology. (Examiner's answer, pages 4-6.)

We reverse this rejection.

Welborn describes ethylene polymers produced by polymerizing ethylene, either alone or in combination with other monomers such as alpha-olefins, in the presence of a catalyst composition comprising at least a cyclopentadienyl-transition metal compound and an aluminoxane at elevated temperatures and pressures. (Column 3, lines 17-30.) In Tables I and II, Welborn describes working examples of ethylene polymers having densities within the range recited in the appealed claims. Further, Welborn teaches that the polymers have molecular weight distributions (M_w/M_n) typically from 1.5 to 3.0 and that these polymers "are capable of being fabricated into a wide variety of articles, as is known for homopolymers of ethylene and copolymers of ethylene and higher alpha-olefins." (Column 8, lines 12-28.)

As admitted by the examiner (examiner's answer, page 4), Welborn does not disclose a food covered with a film or packaging including an ethylene polymer having the recited combination of properties. To account for this difference, the

is a C_1-C_{10} alkyl group, X is Cl, Br or I, and y is 1 or 2. (Column 3, line 66 to column 4, line 21; column 4, lines 41-43.)

Packaging Technology teaches that high density polyethylene can be fabricated into films for packaging cereals, crackers, and snack foods. (Pages 313-14.) In Figure 2, Packaging Technology teaches that WVTR decreases with increasing density.

The examiner states:

> It would have been obvious for one of ordinary skill in the art at the time of the invention to use the Welborn et al. polymers to fabricate films to be used in conjunction with food products because ethylene polymers are well known packaging materials for food products as taught by the textbook [Packaging Technology].

(Examiner's answer, page 5.)

The examiner further contends:

> As to the properties claimed, the polymers disclosed by Welborn et al. are made using the same catalyst, starting material and process as the claimed polymer; thus, it is inherent the polymers will have the same properties as claimed.

(Id.)

The problem with the examiner's analysis regarding inherency, however, is that the appellant is not merely claiming an ethylene polymer. Here, Welborn does not teach an ethylene

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[sic, ethylene vinyl acetate copolymer]." (Examiner's answer, p. 5.)

polymer film or packaging, much less an ethylene polymer film or packaging for food with the combination of recited properties. Further, none of the other applied prior art references teach a film for food products made from an ethylene polymer having the combination of the properties recited in the appealed claims. The fact that the recited properties might be inherent in following the combined teachings of the prior art is immaterial if one of ordinary skill in the art did not appreciate or recognize these inherent properties. In re Naylor, 369 F.2d 765, 767-68, 152 USPQ 106, 108 (CCPA 1966)("[T]he fact that a rubbery polybutadiene having high 1,2-addition might be inherent in following the combined teachings of the prior art is quite immaterial if, as the record establishes here, one of ordinary skill in the art would not appreciate or recognize that inherent result.").

For these reasons, we reverse the examiner's rejection under 35 U.S.C. § 103(a) of all the appealed claims as unpatentable over Welborn in view of Nordness, Nowlin, and Packaging Technology.

The decision of the examiner is reversed.

REVERSED

TERRY J. OWENS	)
Administrative Patent Judge	)
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	) BOARD OF PATENT
PAUL LIEBERMAN	)
Administrative Patent Judge	) APPEALS AND
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	) INTERFERENCES
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